



Australian Government

Assessment Requirements for MSMPMC300 Produce structural precast concrete

Release: 1

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Modification History

Release 1. New unit. Supersedes and is equivalent to PMC553051 Produce structural precast concrete

Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and:

- produced at least 1 structural precast concrete product, including:
 - monitoring the following key variables to ensure product integrity and conformance to specification:
 - mould condition
 - amount and consistency of concrete mix
 - placement and anchorage of reinforcement and fittings
 - placement of voids and ducts
 - tension of reinforcement
 - concrete cover
 - compaction and vibration
 - curing conditions
 - curing time and rate
 - stripping strength
 - recognising possible causes of the following routine problems:
 - raw material and mix variations
 - mould anomalies
 - casting and operating conditions
 - reinforcement abnormalities
 - process errors.
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Knowledge Evidence

There must be evidence the candidate has knowledge of:

- principles of casting process
- significance to structural concrete products of key factors, including:
 - concrete cover
 - role of reinforcement
 - placement and anchorage of reinforcement and fittings

- stressing and destressing
- curing
- compaction and vibration
- formwork and specialised formwork (including voids and ducts)
- mould design
- mould condition and wear
- water and cement ratio
- concrete finishing
- methods of:
 - curing
 - compaction
 - fabrication
- concrete sampling and testing procedures
- the potential effects of variations in raw materials and equipment operation and processes in relation to quality of product
- quality requirements at each stage of production
- common adjustments in variables and their impact on product quality and production output
- routine and non-routine problems, their probable causes and relevant corrective actions
- hazards from critical stages of pre-stressing reinforcement (placement, stressing, de-stressing, cutting)
- work health and safety (WHS) requirements relevant to work outcome
- structural precast and pre-stressed concrete production hazards and:
 - their possible causes
 - potential consequences
 - risk control procedures.
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Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - structural precast concrete equipment and ancillary equipment
 - materials to be processed
 - specifications, procedures and job sheets
- modelling of industry operating conditions, including:
 - routine and non-routine problems.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

Companion Volume Implementation Guides are available at VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=d1287d36-dff4-4e9f-ad2c-9d6270054027>